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(12) Patent:

(11) CA 604140

(54) PREFABRICATED FRAME FOR DOORS, WINDOWS AND THE LIKE

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ABSTRACT:

CLAIMS: [Show all claims](#)

*** Note: Data on abstracts and claims is shown in the official language in which it was submitted.

(72) Inventors (Country): **WILLIAM H. CARLTON** (Not Available)

(73) Owners (Country): **WILLIAM H. CARLTON** (Not Available)

(71) Applicants (Country):

(74) Agent:

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This invention relates to prefabricated frames for doors, windows, milk boxes and the like. It is particularly directed to providing a novel and useful construction which is prefabricated and assembled in the factory to specific dimensions and which readily and quickly may be assembled in place at the construction site.

Conventional fabrication of frames for doors, windows, milk boxes and the like on the construction site have several inherent disadvantages. Precise woodworking requiring the services of skilled tradesmen is normally a necessity. Such skilled work is expensive and under standard work conditions encountered at most construction sites is slow and inefficient. Also, unfavourable working conditions encountered during the winter months in the northern climates impede the rate of construction and quality of the finished installations. These factors, taken individually or collectively, usually augment building costs excessively.

Such prefabricated frames that have been available to the construction industry have been largely unsuitable for the purpose intended due to complete and final assembly of the units at the factory, which resulted in unwieldy, cumbersome structures which are fragile and susceptible to damage; also handling of

the packaged assembly was impractical and shipping costs prohibitive. The frame and complimentary equipment, a door, window or the like, had to fit accurately. If slightly oversized or undersized, as is commonly the case, extensive modifications were required which again defeated the purpose for which the prefabricated frames were intended.

I have found that the former of these disadvantages may be overcome by precutting and fitting the frames and incorporating locks, hinges, latch striker plates, keepers and the like in a factory under conditions optimum for precise work, which is one of the major objects of my invention.

To contend with the above latter disadvantages, another important object of this invention is to provide frames partially assembled to allow quick and ready final assembly at the construction site. To permit this assembly, novel features have been added to the sections allowing flexibility necessary for installation and to allow for minor variations in wall dimensions.

A further important object of this invention is the interlocking and self-supporting features of the component parts of the frame which permits and allows for final accurate squaring and adjusting of the assembly during installation and prior to permanent fastening.

Another important object of this invention is to provide an assembly which can be readily shipped disassembled as a compact and sturdy package which is capable of withstanding handling, loading and unloading usually encountered in the transportation of materials of this type to the point of use.

These and other objects of the invention will become apparent from the following detailed description, reference being made to the accompanying drawings, in which:

Figure 1 is a section of the jamb, casing and door stop taken along line 2-2 of Figure 2.

Figure 2 is an elevation, showing the interlocking nature of the head and side assemblies.

Figure 3 is an elevation of the interlocking joint, in detail, showing the head unit ready for assembly with a side unit; and

Figure 4 is a perspective view of the head and side units ready for assembly.

The frame normally consists of three basic parts; the two vertical side members 5 and the horizontal top member 6. These component parts are in turn uniformly composed of three parts; the jamb portion 7 to which the casing members 8-8a are permanently affixed longitudinally

along a precut rabbet joint 9, such as by an adhesive or with nails, screws or staples or a combination of both.

5 Longitudinal slots 10 cut into the jamb 7 and cut-outs 11 in the casing 8 provide flexibility to the integrated unit permitting flexing of the parts necessary for installation.

10 The head jamb 12 is formed with a rabbet joint 13 along a transverse edge to receive the side jamb 14 which ensures a compact and precise joint 15 free from lateral and vertical deviation. This interlocking feature aids in rapid installation.

15 To effect a tight fit with the wall 16-16a, a right-angle rabbet joint 9 is cut so that the included angle 17 is not less than about 91° and not more than about 95° and included angle 18 is correspondingly not more than about 89° and not less than about 85° , the preferred embodiment being about 91° and about 89° respectively as shown. This feature, referred to as
20 "toeing-in", imparts a springiness to the jamb and casing units.

25 To facilitate installation, the inside leading edges of the side and top casings bearing on the wall 16-16a are rounded. This feature, together with the "toeing-in" of the casing are the primary factors permitting considerable variation in wall thickness as well as local wall irregularities. Furthermore, the hugging action afforded by the flexible "toed-in" casing, together with

the self-guiding action of the rounded leading edges 16, interact to permit rapid and ready installation of the frames on the wall and allow self-support while the frames are being squared and adjusted to meet 5 irregularities. Normally, the head member is stationed in place and the side members flexed and sprung into place, embracing the edges of the opposing wall.

A saw kerf formed in the mating corner of each casing member, and the use of clamp nails or the 10 like means, allow final fastening of the mating joints and immobilization of the head and side jambs.

In the case of internal installations, such as doors, where the common procedure is to install the door frames on the sub-floor prior to installation of the 15 completed floor, the side casing 5 and the projecting portion of the side jamb 14 may be trimmed to allow for the final floor thickness. A particular example is the allowance of a 7/16 inch rebate for 3/8 inch hardwood on paper.

20 In the case of the external installations such as outside doors, windows, milk boxes and the like, where a sill is necessary, the usual procedure is to install the sill first and then incorporate the remaining frame structure as a prefabricated unit as hereinbefore 25 described. Also, the frame assembly can be provided in

the factory with the conventional hinge plates, latch strike plates and keepers and the like. A stop member 20 can be provided with the frame or applied after the frame is installed.

5 Prefabrication of these units allows fitting and hanging of doors, windows and the like and the incorporation of locks, latch striker plates and keepers, and hinges and other accessory equipment in the factory where optimum work conditions exist. Immediately upon
10 completion of the frame installation, the door or window can be hung according to conventional practice.

 The prefabricated frame of this invention possesses a number of important advantages. Skilled craftsmen are not necessary for its installation. The
15 frame can be readily transported. For example, a partially assembled frame for a standard doorway can be readily and economically shipped as a 6 inch square by $6\frac{1}{2}$ foot long unit. It can be installed easily and quickly, thus effecting important savings in the overall
20 cost of constructing a building. For example, in a recent installation, all the frames were installed and the doors hung in a six room house in eleven minutes.

 It will be understood, of course, that modifications of the preferred embodiment of the
25 invention described and illustrated herein can be made without departing from the scope of the invention as defined by the appended claims.

The embodiments of the invention in which an exclusive property or privilege is claimed, are defined as follows:

1. A prefabricated frame comprising vertical side members and a horizontal top member for use in buildings, each member comprising an elongated jamb member, rabbets formed in the longitudinal edges of said jamb member, a pair of casing members, an edge of each of said casing members being adapted to mate with a rabbet in a longitudinal edge of said jamb member, said casing members being inwardly inclined from a plane perpendicular to the plane of the wide axis of the jamb member, and means for securing said casing and jamb members together along the opposing, rabbeted, marginal edges thereof, said members designed for flexing to embrace the edges of an opening in a wall structure.

2. A prefabricated frame as described in claim 1 in which the casing members are inwardly inclined from a plane perpendicular to the plane of the wide axis of the elongated jamb member not less than about 1° and not more than about 5° .

3. A prefabricated frame as described in claim 1, in which the casing members are inwardly inclined about 1° from a plane perpendicular to the plane of the wide axis of the elongated jamb member.

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4. A prefabricated frame as described in claim 1, claim 2 or claim 3 in which a plurality of longitudinal slots are formed in the said elongated jamb member and a longitudinal slot is formed in each of the casing members.

5. A prefabricated frame comprising vertical side members and a horizontal top member for use in buildings, each member comprising an elongated jamb member, rabbets formed in the longitudinal edges of said jamb member, a pair of casing members, an edge of each of said casing members being adapted to mate with a rabbet in a longitudinal edge of said jamb member, an edge of each of said casing members being rounded, said casing members being inwardly inclined from a plane perpendicular to the plane of the wide axis of the jamb member, and means for securing said casing members and jamb member together along the opposing, rabbeted, marginal edges thereof, said members designed for flexing to embrace the edges of an opening in a wall structure.

6. A prefabricated frame as described in claim 5 in which the casing members are inwardly inclined from a plane perpendicular to the plane of the wide axis of the elongated jamb member not less than about 1° and not more than about 5° .

10

7. A prefabricated frame as described in claim 5 in which the casing members are inwardly inclined about 1° from a plane perpendicular to the plane of the wide axis of the elongated jamb member.

8. A prefabricated frame as described in claim 5, claim 6, or claim 7 in which a plurality of longitudinal slots are formed in the elongated jamb member and a longitudinal slot is formed in each of the casing members.

9. A prefabricated frame comprising vertical side members and horizontal top and bottom members, for use in buildings, each member comprising an elongated jamb member, rabbets formed in the longitudinal edges of said jamb member, a pair of casing members, an edge of each of said casing members being adapted to mate with a rabbet in a longitudinal edge of said jamb member, an edge of each of said casing members being rounded, said casing members being inwardly inclined from a plane perpendicular to the plane of the wide axis of the jamb member, and means for securing said casing members and jamb member together along the opposing, rabbeted, marginal edges thereof, said members designed for flexing to embrace the edges of an opening in a wall structure.

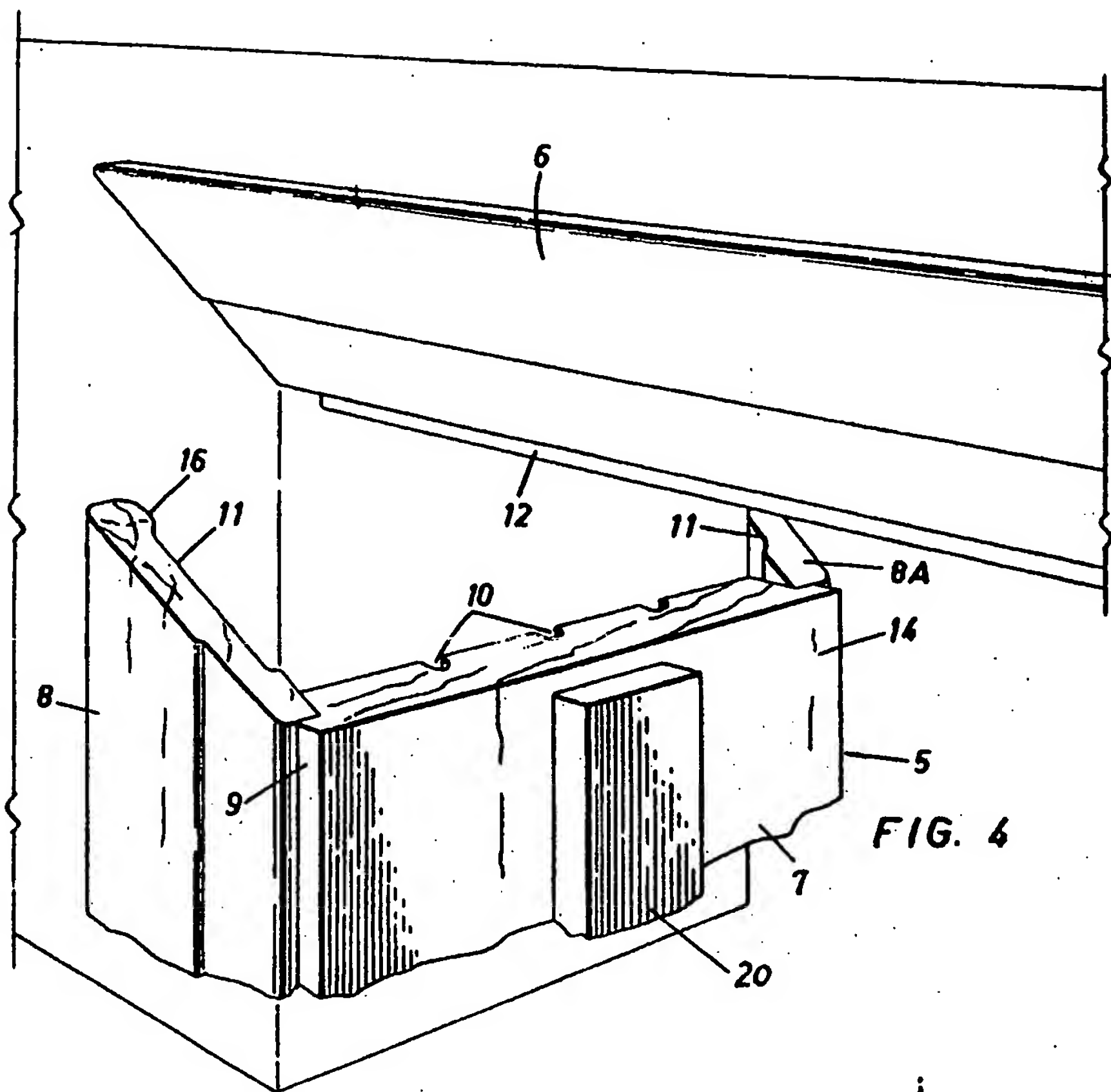


FIG. 4

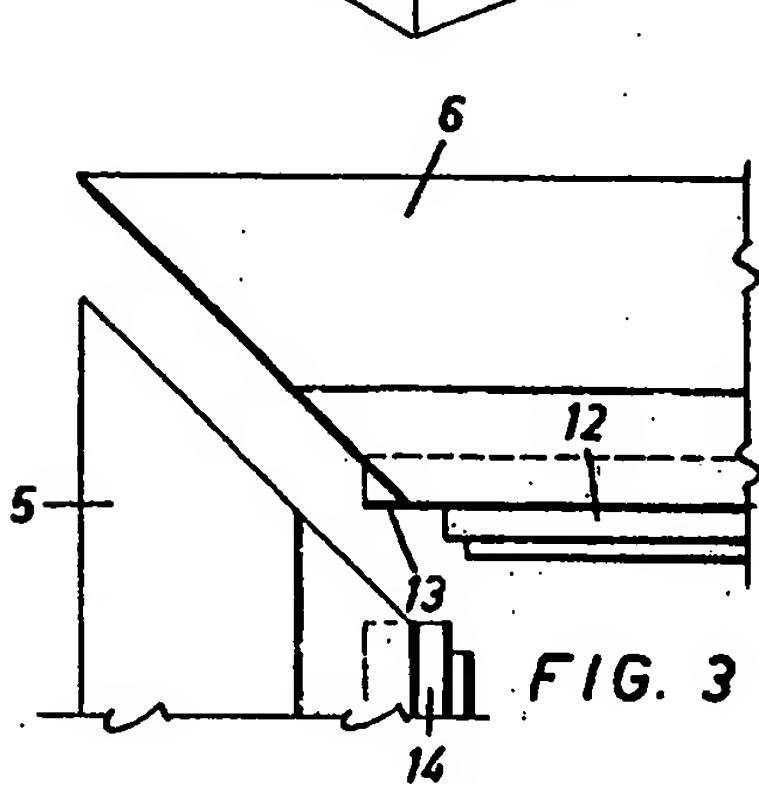


FIG. 3

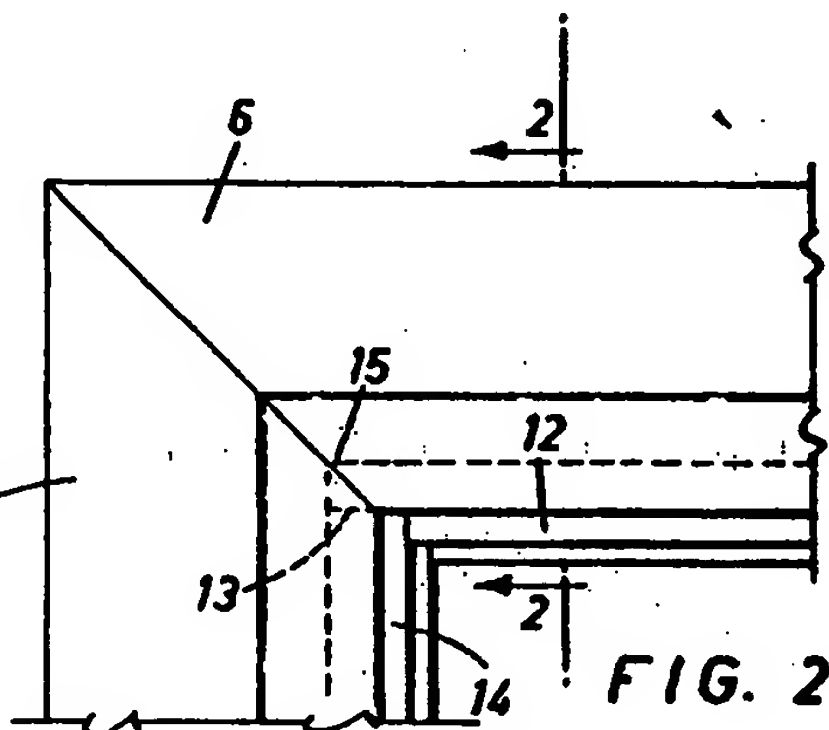


FIG. 2

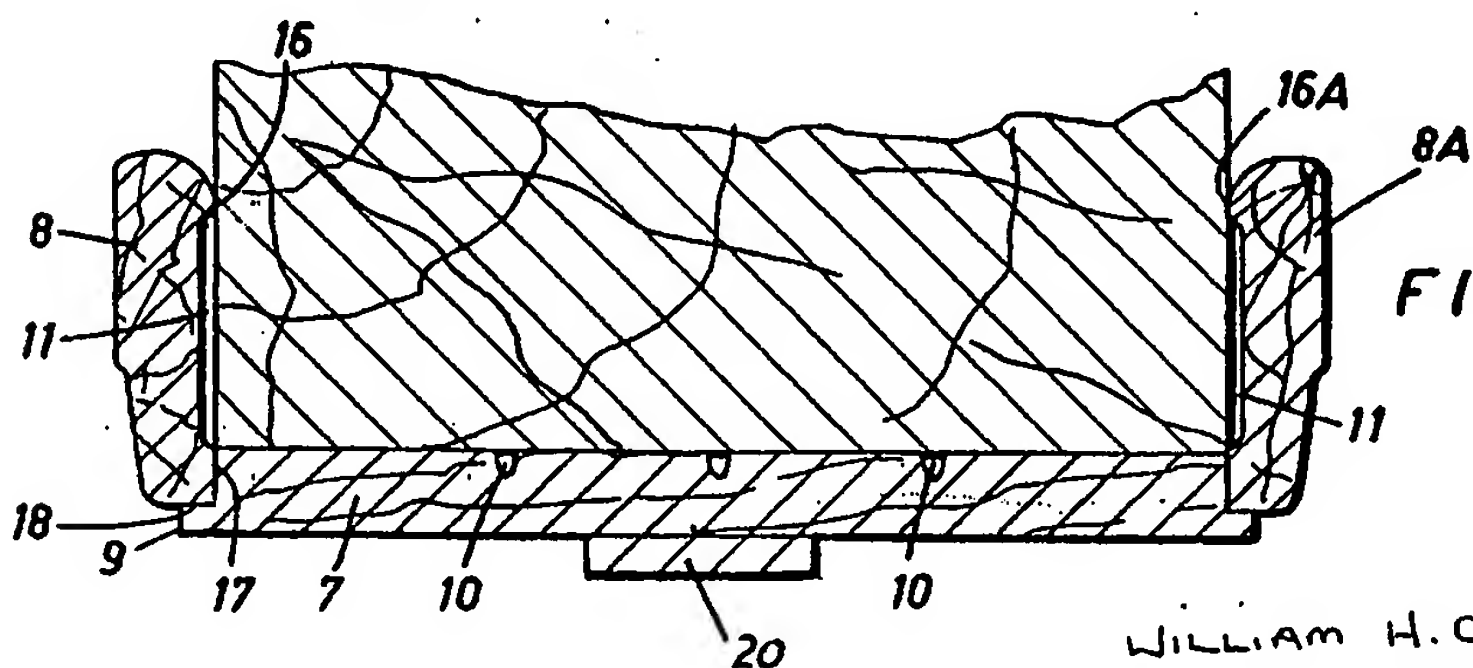


FIG. 1

WILLIAM H. CARLTON
INVENTOR
G. Harold Riches
ATTORNEY